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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,145	07/10/2002	Harri Holma	004770.01209	9803
22907 7590 09/06/2007 BANNER & WITCOFF, LTD. 1100 13th STREET, N.W. SUITE 1200 WASHINGTON, DC 20005-4051			EXAMINER BURD, KEVIN MICHAEL	
			ART UNIT 2611	PAPER NUMBER
			MAIL DATE 09/06/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/089,145

Applicant(s)

HOLMA, HARRI

Examiner

Kevin M. Burd

Art Unit

2611

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 16-22, 26-37 and 41-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 16-22, 26-37 and 41-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/20/2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

1. This office action, in response to the amendment filed 7/2/2007, is a final office action.

Response to Arguments

2. The previous claim objection and rejection of the claims under 35 USC 112, second paragraph is withdrawn.

3. New objections to the drawings and the claims are stated below.

4. Applicant's arguments filed 7/2/2007 have been fully considered but they are not persuasive. Applicant states the making an estimate of the spreading factor used to transmit the data unit is not disclosed in Dahlman. The examiner disagrees. Dahlman discloses despreading a PCCH using a spreading factor. The despreading of the control channel will recover a spreading factor for the PDCH. This spreading factor is provided to the PDCH demodulator. This spreading factor is the spreading factor estimate. As stated in the previous office action, the variable rate transmissions have the advantage of using a lower bit rate that gives a higher spreading factor and allows a lower transmit power (column 4, lines 1-8). Therefore, the power of the transmit signal corresponds to the spreading factor. The estimate of the spreading factor used to transmit the data will correspond to the estimated spreading factor used to decode the PDCH. In addition, the spreading factor of the PCCH is known in the receiver. However, the spreading factor of the PDCH is not known in the receiver until after the despreading of the PCCH.

For these reasons and the reasons stated in the previous office action, the rejections of the claims are maintained and stated below.

Drawings

5. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claims means and components of claims 45-50 must be shown or the features canceled from the claims. A receiver is shown in figure 3. The RF section demodulates the received signal into I and Q portions but does not describe the means or components to decode the specific portions of the control and data information. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

6. Claims 45-50 are objected to because of the following informalities: Claims 45-50 claims a system or mobile station and claim components or means to describe the system or mobile station. However, it is unclear where the means or components are disclosed in the originally filed specification. A receiver is shown in figure 3. The RF section demodulates the received signal into I and Q portions but does not describe the means or components to decode the specific portions of the control and data information. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claims 16-22, 26-32, 35-37 and 41-50 are rejected under 35 U.S.C. 102(e) as being anticipated by Dahlman et al (US 6,222,875).

Regarding claims 41, 43, 45, 47, 48 and 35-37, Dahlman discloses a method of using the receiver shown in figure 1. The receiver receives a physical data channel (PDCH) and a physical control channel (PCCH). The spreading factor of the PCCH is known a priori to the receiver (column 3, lines 66-67). The PCCH comprised both

control information and data. The decoding of the PCCH channel is at the assumed (a priori) spreading factor. Once the PCCH is demodulated and decoded, the PCCH provides a PDCH spreading factor to the PDCH demodulator (figure 1). The decoding takes place using this spreading factor estimate. This is also described in claims 1 and 5. Dahlman claims a receiver for receiving two physical channels, partially despreading one of the channels, buffering the partially despread signal and despreading the buffered signal using a second code once the bit rate information associated with the first signal is recovered. The variable rate transmissions have the advantage using a lower bit rate that gives a higher spreading factor and allows a lower transmit power (column 4, lines 1-8). Therefore, the power of the transmit signal corresponds to the spreading factor. The estimate of the spreading factor used to transmit the data will correspond to the estimated spreading factor used to decode the PDCH.

Regarding claims 42, 44 and 46, figure 2 discloses the spreading of the PDCH and PCCH with common scrambling.

Regarding claim 16, Dahlman discloses the PDCH and PCCH are combined and share common scrambling. This scrambling interleaves the signals.

Regarding claims 17 and 18, the data to be transmitted comprise a plurality of frames. The "data unit" can be one, many or all of these frames.

Regarding claims 19 and 26-28, the spreading factor used to decode the frame will be the appropriate spreading factor for each specific frame transmitted. This spreading factor can be the lowest spreading factor.

Regarding claims 20 and 29-32, the relationship between the spreading factor, bit rate and transmit power is known (column 4, lines 1-5).

Regarding claim 21, as stated above, once the spreading factor is recovered from the control information, the data is despread using the spreading factor.

Regarding claim 22, the CDMA system accommodates a plurality of users.

Regarding claims 49 and 50, the variable rate transmissions have the advantage of using a lower bit rate that gives a higher spreading factor and allows a lower transmit power (column 4, lines 1-8). Therefore, the power of the transmit signal corresponds to the spreading factor. The relationship between the spreading factor, bit rate and transmit power is known (column 4, lines 1-5).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin M. Burd whose telephone number is (571) 272-3008. The examiner can normally be reached on Monday - Friday 9 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Payne can be reached on (571) 272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin M. Burd
9/4/2007


KEVIN BURD
PRIMARY EXAMINER